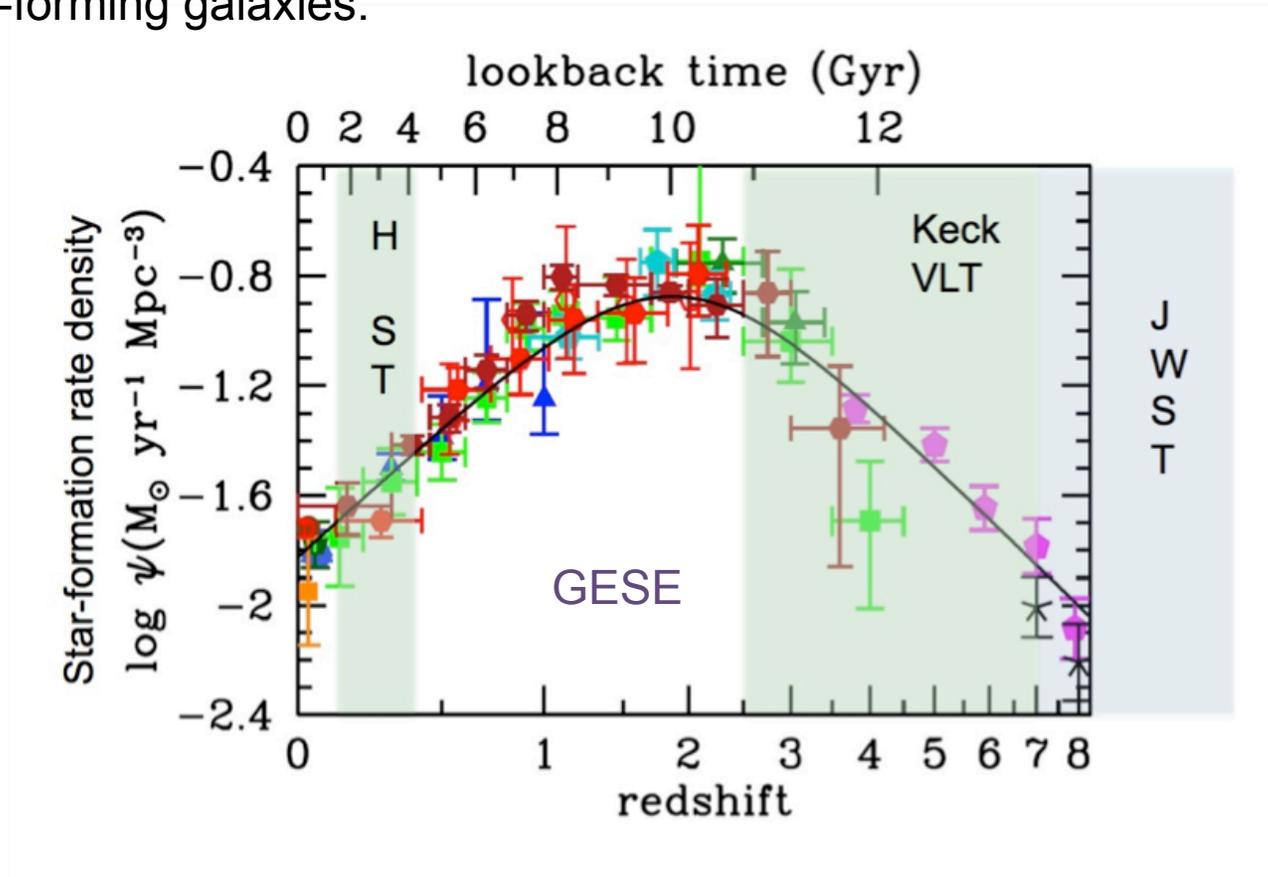


Galaxy Evolution Spectroscopic Surveyor (GESS)

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GESS will survey the galaxies at redshifts, $z \sim 1-2$ in the near-ultraviolet (restframe far- ultraviolet). GESS is a UV multi-object spectrograph (MOS) with instantaneously configurable slits provided by a micro-shutter array (MSA). It will survey $>100,000$ $z \sim 1-2$ star-forming galaxies.



GESE will team up with Subaru's Prime Focus Spectrograph (PFS) to observe star-forming $z\sim 1-2$ galaxies, together providing the full suite of diagnostics about the stars, gas, and dust in these galaxies.

	GESE	Subaru/PFS
Scientific Goals	Galaxy evolution	Galaxy evolution (1 of 3)
Primary targets	$z\sim 0.8-2.0$ galaxies	$z\sim 0.8-2$ galaxies
Wavelength coverage	0.2-0.4 μm (spec); 0.4-0.8 μm (img)	0.4-1.3 μm
Shutter/fiber FOV	2.75"x5.50"	1.0" diameter
Field of View	0.084 sq. deg.	1.1 sq. deg.
Coverage of Lyman α	$z\sim 0.7-2.2$	$z>2.2$
Telescope	1.5 m	8.2 m
Primary mission	3 years ($\sim 25,000$ hr)	100 nights
Exposure time	5 hr	$\sim 0.3-3$ hr
Spectra per exposure	50-100	2000
Spectra density	600-1200 spec/deg ²	1800 spec/deg ²
Sensitivity	few $\times 10^{-18}$ erg/s/cm ² /Å	few $\times 10^{-18}$ erg/s/cm ² /Å